

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A chemical-amplification positive-working photoresist composition suitable for the formation of a photoresist layer having a thickness in the range from 100 to 650 nm on the surface of a substrate which comprises, as a uniform solution in an organic solvent:

an organic acid-generating compound capable of generating an acid by the irradiation with actinic rays;

a resinous compound having acid-dissociable groups and capable of being imparted with increased solubility in an aqueous alkaline solution by interaction with an acid; and

a surface active agent in a concentration not exceeding ~~50~~ 10 ppm by weight based on the amount of the resinous compound ~~but sufficiently high to effect substantial decrease of defects in a patterned resist layer formed from the photoresist composition.~~

2. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the resinous compound is a hydroxystyrene-based copolymer comprising monomeric units of hydroxystyrene substituted by acid-dissociable groups for the hydrogen atoms in the hydroxyl groups.

3. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the resinous compound is a hydroxystyrene-based copolymer comprising monomeric units of hydroxystyrene, monomeric units of styrene and monomeric units of acrylic or methacrylic acid substituted by acid-dissociable groups for the hydrogen atoms in the carboxyl groups.

4. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the acid-dissociable group is selected from the group consisting of tertiary alkyloxycarbonyl groups, tertiary alkyloxycarbonylalkyl groups, tertiary alkyl

groups, cyclic ether groups, alkoxyalkyl groups, 1-alkyl monocycloalkyl groups and 2-alkyl polycycloalkyl groups.

5. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 4 in which the acid-dissociable group is selected from the group consisting of *tert*-butyloxycarbonyl group, *tert*-butyloxycarbonylmethyl group, *tert*-butyl group, tetrahydropyranyl group, tetrahydrofuranyl group, 1-ethoxyethyl group, 1-methoxypropyl group, 1-methylcyclohexyl group, 1-ethylcyclohexyl group, 2-methyladamantyl group and 2-ethyladamantyl group.

6. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 2 in which the resinous compound comprises the monomeric units of hydroxystyrene substituted for the hydrogen atoms in the hydroxyl groups by acid-dissociable groups selected from the group consisting of *tert*-butyloxycarbonyl group, *tert*-butyloxycarbonylmethyl group, *tert*-butyl group, tetrahydropyranyl group, tetrahydrofuranyl group, 1-ethoxyethyl group and 1-methoxypropyl group in a molar fraction of 10 to 60%.

7. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 2 in which the resinous compound is a combination of (b1) a first polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of *tert*-butyloxycarbonyloxystyrene and (b2) a second polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of alkoxyalkyloxystyrene in a (b1):(b2) weight proportion in the range from 10:90 to 90:10.

8. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 2 in which the resinous compound is a combination of (b3) a third

polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of tetrahydropyranyloxystyrene and (b2) a second polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of alkoxyalkyloxystyrene in a (b3):(b2) weight proportion in the range from 10:90 to 90:10.

9. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 2 in which the resinous compound is a combination of (b4) a fourth polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of *tert*-butoxystyrene and (b2) a second polyhydroxystyrene-based copolymer having a weight-average molecular weight of 2000 to 30000 with a molecular weight dispersion of 1 to 6.0 and comprising from 10 to 60% by moles of monomeric units of alkoxyalkyloxystyrene in a (b4):(b2) weight proportion in the range from 10:90 to 90:10.

10. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the organic acid-generating compound is capable of generating an acid by the irradiation with KrF excimer laser beams.

11. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the resinous compound is a resin without aromaticity having a polycyclic hydrocarbon group in the main chain structure or in the pendant group.

12. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 in which the organic acid-generating compound is capable of generating an acid by the irradiation with ArF excimer laser beams.

13. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 which further comprises from 0.01 to 1 part by weight of a tertiary aliphatic amine compound per 100 parts by weight of the resinous compound.

14. **(Previously Presented)** The chemical-amplification positive-working photoresist composition as claimed in claim 1 which further comprises from 0.01 to 1 part by weight of a carboxylic acid compound per 100 parts by weight of the resinous compound.

15. **(Previously Presented)** A photosensitive material for photolithographic patterning which comprises, as an integral layered body:

(a) a substrate; and

(b) a photoresist layer having a thickness in the range from 100 to 650 nm formed on the surface of the substrate from the chemical-amplification positive-working photoresist composition defined in claim 1.

16. **(Previously Presented)** The photosensitive material as claimed in claim 15 in which an antireflection coating film having a thickness in the range from 10 to 160 nm intervenes between the substrate surface and the photoresist layer.

17. **(Previously Presented)** The photosensitive material as claimed in claim 15 in which the photoresist layer has a thickness in the range from 300 to 570 nm.